

IDS to SDD Transition Guide v2.5

This document provides supplemental information about the SDD diagnostic environment launched on IDS DVD119, and is highly recommended to be read by all JLR Service Technicians before using SDD.

The information herein elaborates on basic user training information previously released to GTR under "Service Information > Training > Symptom Driven Diagnostics (SDD) Student Guide Draft".

Since SDD processes and displays vehicle information much differently from the current "Legacy IDS" interface this document will attempt to explain these differences, including important new behavior and procedures which must be understood by all users. This information however is NOT a "standalone" information resource and makes the following assumptions.

- The reader is a formally trained or well experienced user with the "Legacy IDS" diagnostic tool.
- The reader has previously read the SDD Student Guide Draft on GTR and has a copy available for ready reference to screens and procedures discussed in this document.
- Refer to the complete DVD119 related publications list on page 7 for other supporting information.

DVD119 - reported issues: Pages 1 - 6 (Transition Guide begins on page 8)

<p>ISSUE: CCF parameters are not "unlocked" for editing after entering coded access mode.</p> <p>It may take more than one attempt to "unlock" SDD to enable coded access functions.</p> <p>SOLUTION: DVD119v8.05 includes an update to the coded access functions on SDD</p>	<p>FIXED</p>
<p>ISSUE: Unable to start an SDD session on LR3 V6 variants.</p> <p>Users report that no information is displayed where the network summary is supposed to appear. Attempting to continue with the session generates an error message.</p> <p>SOLUTION: This has been fixed on DVD119v8.05</p>	<p>FIXED</p>
<p>ISSUE: Unable to launch a "diagnosis" session type on Jaguar XF vehicles, SDD reports a system error.</p> <p>Incorrect info in SDD database on DVD119v8.01</p> <p>SOLUTION: This has been fixed on DVD119v8.02</p>	<p>FIXED</p>
<p>ISSUE: BCM new module programming not available for LR4</p> <p>Info missing from SDD database on DVD119v8.01</p> <p>SOLUTION: This has been fixed on DVD119v8.02</p>	<p>FIXED</p>
<p>ISSUE: Key programming not available for 10MY LR4 & Range Rover Sport</p> <p>Info missing from SDD database on DVD119v8.01</p> <p>SOLUTION: This has been fixed on DVD119v8.02</p>	<p>FIXED</p>

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<p>ISSUE: Microsoft Internet Explorer has lost "Menu Buttons" & Address bar</p> <p>This was done to ensure SDD was correctly navigated only using the links and functions within SDD. Preventing access to these controls for other internet applications or troubleshooting connectivity was unintended.</p> <p>SOLUTION: DVD119v8.02 includes a modification to this strategy. The default setting will only display the "text" menu bar. Using the "view" options, it will be possible to add the address bar back to the Internet Explorer window. While it is also possible to temporarily add other navigation features as well, these may be reset whenever Internet Explorer is launched.</p>	<p>MODIFIED</p>
<p>ISSUE: Automatic VIN read fails, XXXXXXXX's displayed in VIN box.</p> <p>This can occur for numerous reasons.</p> <p>SOLUTION:</p> <ul style="list-style-type: none"> ➤ Confirm SDD recognizes the VCM. Review the VCM and battery icons at top right of screen, remove and replace the USB connection to the VCM and confirm the icons are responding. Ensure the vehicle's DLC is in good condition and all terminals are secure. ➤ If after checking the basics the VIN read is still reporting all X's, manually enter the VIN and begin an SDD session. ➤ When the network summary screen is displayed, if comms errors are displayed, diagnose accordingly. ➤ If the VIN read failed, but the network summary displayed no errors, report the failure via EPQR as per the guidelines in appendix B 	<p>INFO ONLY</p>
<p>ISSUE: A "Windows" style pop-up error message stating "Validation failed on Registry.XML. Reason: XML document must have a top level element" and SDD cannot be started.</p> <p>A file critical to the IDS/SDD applications has become corrupted.</p> <p>SOLUTION: Repair the current installation of IDS.</p> <ul style="list-style-type: none"> ➤ Users can use the current DVD installation media to repair the current installation by running the install program and selecting the "repair" option in the dialog window. ➤ Alternatively, users may elect to perform a static restore using the phoenix recovery console to restore the windows environment and IDS software from scratch. ➤ The second option may be required if problems persist. 	<p>INFO ONLY</p>
<p>ISSUE: Users reporting difficulty using SDD to select symptoms to diagnose keyless/smart key systems. Users also report difficulty diagnosing MIL related symptoms and claim SDD is not providing effective recommendations.</p> <p>Symptoms for ignition control failures on smart key systems are located under the "Electrical" category, MIL related symptoms are linked to "Electrical > Instruments"</p> <p>SOLUTION: See additional info added to section 10 of the IDS to SDD Transition Guide v2.1 for complete details for both of these issues.</p>	<p>INFO ONLY</p>

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<p>ISSUE: When attempting to read bulletins or SSM's listed on the recommendations tab, SDD reports "Sorry, document not available"</p> <ul style="list-style-type: none"> ➤ Since SDD does not yet have a direct link to other JLR data resources, reference documentation must be included with DVD and Software Update packages. ➤ Documents not yet added to SDD will display this message if only a "placeholder" was added to the recommendations list. <p>SOLUTION: See additional info added to section 9 of the IDS to SDD Transition Guide v2.1</p>	INFO ONLY
<p>ISSUE: Unable to locate or download software updates for DVD119v8</p> <p>IDS is not correctly configured for connectivity, or normal behavior is being misinterpreted.</p> <p>SOLUTION:</p> <ul style="list-style-type: none"> ➤ See additional info added to section 9 of the IDS to SDD Transition Guide v2.4 ➤ Ensure all your dealer details have been confirmed and saved. ➤ Confirm connectivity has been activated and re-activate if unsure. ➤ Ensure your retailer IT has been instructed to adjust network settings and firewalls for DVD119 as per IDS documentation published 10/14/2009 (1-225NAS2 or STE09-10) ➤ As of 6/11/10 additional details regarding Anti-virus and Firewall requirements for SDD has been published as 1-235NAS and STE-10-03 for Jaguar and Land Rover respectively. ➤ Retailer IT staff having difficulties resolving connectivity issues are encouraged to review all IDS connectivity related publications and contact the IDS Connectivity Helpline as required. 	INFO ONLY
<p>ISSUE: Launching SDD is not possible, either an Internet Explorer web browser window opens displaying an error message, OR the user is prompted to set-up an internet connection and if this set-up wizard is canceled the web browser is never displayed.</p> <ul style="list-style-type: none"> ➤ Firewalls and proxy settings can create conflicts on the local PC preventing SDD from being launched. ➤ If users are trying to use DVD119 but are unable to set-up or configure the internet connections at their retailer, the internet connection set-up dialog might be intentionally cancelled. ➤ If the initial internet connection is never configured, it will not be possible to launch SDD. <p>SOLUTION:</p> <ul style="list-style-type: none"> ➤ Use CTRL+ALT+DEL to shut-down and restart IDS. IF PROBLEMS PERISIST; review the info below. ➤ Ensure your retailer IT has been instructed to adjust network settings and firewalls for DVD119 as per IDS documentation published 10/14/2009 (1-225NAS2 or STE09-10) ➤ Users without an active connection at the time DVD119 is first installed should complete the IE connection set-up wizard as if they are using a "broadband connection that is always on". ➤ While it may not be possible to establish a connection to the internet using this option, this will allow DVD119/SDD to be launched properly, until local IT can correctly configure IDS for connectivity. ➤ As of 6/11/10 additional details regarding Anti-virus and Firewall requirements for SDD has been published as 1-235NAS and STE-10-03 for Jaguar and Land Rover respectively. 	INFO ONLY

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<p>ISSUE: Some active Service Campaigns listed on GTR/DDW are not included on SDD</p> <ul style="list-style-type: none"> ➤ Since SDD does not yet have a direct link to other JLR data resources, reference documentation must be included with DVD and Software Update packages. ➤ Data not yet added to SDD may prevent modules from appearing on the recommendations tab after selecting a "Campaigns" session type. <p>SOLUTION:</p> <ul style="list-style-type: none"> ➤ If a module referenced in an active campaign is not available when selecting a "Campaigns" session type, <u>module programming can be accessed via the "Extras" tab after changing to a "Diagnosis" session type</u>. Always select symptoms that effectively describe the issue indicated in the campaign documentation from GTR to have SDD build a suitable list of recommendations. ➤ NOTE: The Extras tab will not appear until at least one action on the recommendations tab has been accessed in the current session. ➤ IMMEDIATELY report missing service campaigns when discovered via EPQR so a correction can be issued on the next IDS software update. 	INFO ONLY
<p>ISSUE: "Undocumented" windows firewall pop-up question.</p> <p>Since DVD119/SDD uses Java based software, the Windows firewall included on Windows XP and the standard JLR IDS Toughbooks may display a pop-up question the first time SDD is launched.</p> <p>SOLUTION:</p> <ul style="list-style-type: none"> ➤ ALWAYS choose the "Unblock" option when prompted for this firewall preference for Java software. ➤ As of 6/11/10 additional details regarding Anti-virus and Firewall requirements for SDD has been published as 1-235NAS and STE10-03 for Jaguar and Land Rover respectively. 	INFO ONLY
<p>ISSUE: SDD is extremely slow, and prone to "lock-up"</p> <p>SDD places additional demands on the available PC resources.</p> <p>SOLUTION:</p> <ul style="list-style-type: none"> ➤ Always follow published practices for IDS maintenance and ensure the hard drive is not excessively fragmented. ➤ Perform Scan Disc and Defrag from the SDD Configuration functions available on the SDD Main Menu ➤ See note about SDD performance following this table for more info. ➤ See additional info added to section 9 of the IDS to SDD Transition Guide v2.2 ➤ As of 6/11/10 additional details regarding Anti-virus and Firewall requirements for SDD has been published as 1-235NAS and STE10-03 for Jaguar and Land Rover respectively. 	INFO ONLY
<p>ISSUE: Vbatt icon is erratic and voltage reading is inaccurate</p> <p>While this issue is most commonly caused by poor connections at the vehicle DLC or VCM cabling, anti-virus software may also be the root cause of this issue on DVD119 onwards.</p> <p>SOLUTION:</p> <ul style="list-style-type: none"> ➤ After verifying the VCM to vehicle connections and cables are in good condition, consult with local IT to have them review anti-virus logs and settings to ensure it is not blocking the VCM/LAN communications. ➤ As of 6/11/10 additional details regarding Anti-virus and Firewall requirements for SDD has been published as 1-235NAS and STE10-03 for Jaguar and Land Rover respectively. 	INFO ONLY

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<p>ISSUE: Users report SDD does not correctly identify "related" events or DTC's</p> <p>It has been suggested that SDD fails to correctly link events/DTC's to symptoms selected.</p> <p>SOLUTION: See info updated in section 10 of the IDS to SDD Transition Guide v2.2 Also refer to info updated in section 3 released with v2.5</p>	<p>INFO ONLY</p>
<p>ISSUE: Users report SDD does not print pages correctly.</p> <p>Users have submitted examples of printed pages with large portions of the screen content cut off.</p> <p>SOLUTION:</p> <ul style="list-style-type: none"> ➤ While there are some screens that require content is brought into view with the scroll bars for printing, which is currently considered normal operation, some examples submitted do not represent the expected printing format. ➤ Ensure the printing preferences set within Internet Explorer and your printer are set to use the "LANDSCAPE" format. ➤ Contact you local IT support personnel with assistance with this if required. ➤ Also with the release of DVD121, a "printer friendly" print icon has been provided on both the related and unrelated event timeline screens to assist with the printing of vehicle DTC's 	<p>INFO ONLY</p>
<p>ISSUE: Users report SDD does not clear DTC's correctly</p> <p>It has been reported that SDD may not clear all DTC's on the first attempt, and a second DTC clear is required to purge remaining codes.</p> <p>SOLUTION:</p> <ul style="list-style-type: none"> ➤ When a single DTC also triggers several faults in other modules, there are cases where the DTC clear sequence allows for some cascading faults to remain if the "trigger" DTC in another module was not already cleared. ➤ U04xx-xx DTC's are most commonly subject to this condition, and may require a second code clearing attempt. ➤ If there are any DTC's that remain after the second attempt to clear DTC's may require further investigation, and are most likely an active DTC. 	<p>UNDER REVIEW</p>
<p>ISSUE: Users report SDD does not read DTC's correctly</p> <p>It has been suggested that SDD does not display all DTC's when checked against what is reported by IDS DVD118.5</p> <p>SOLUTION:</p> <ul style="list-style-type: none"> ➤ Since current SDD training has been limited to Web Courses and printed materials users may not understand how SDD functions well enough yet. See info added to section 3 of the IDS to SDD Transition Guide v2.0 ➤ Some issues and workarounds associated with legacy modules connected to the DS2 BUS on 2006 > 2009 Range Rover are defined in the info added to section 1 of the IDS to SDD Transition Guide v2.2 ➤ Also refer to info updated in section 3 released with v2.5 	<p>UNDER REVIEW</p>

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ISSUE: Land Rover systems do not have an SDD icon on the Main Menu, only the typical IDS icon is seen. Using this icon will launch the "Legacy IDS" interface but DVD119v8.0x is listed as the current software.	UNDER REVIEW
This issue is under investigation and may have several scenarios that can trigger this condition.	
SOLUTION: Refer to SSM #42913 for more details and a self-service instruction for users to correct the icons on the Main Menu	

SDD Performance Note:

While DVD119/SDD has been engineered to operate correctly on all existing JLR issued Panasonic Toughbook models, it does consume additional PC resources compared to previous DVD releases and performance can be improved when additional RAM is added to the system.

Retailers that desire improved performance are advised that *only* an additional 512MB OR 1GB RAM are approved for use with IDS systems running DVD119 or later. (Max 1.5GB on CF18's and Max 2GB on CF19's)

A fully approved RAM upgrade kit will be made available to all Jaguar- Land Rover North America retailers through SPX in the near future to assist retailers with the procurement and installation of RAM for supported Toughbook platforms.

Any IDS system RAM upgrades are to be conducted at the retailer's expense, and no re-imbursement will be available through the Jaguar- Land Rover North America Special Tools program.

IDS System Corruption:

Users have reported a number of random errors that may render DVD119 mostly inoperative. If your system is encountering problems other than what is listed in this table, the installation of DVD119 and/or its updates may be corrupted.

If problems persist after rebooting the laptop and corruption is suspected the IDS software should be reloaded.

Alternatively a complete IDS system recovery may be required if Windows related files are also corrupted.

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Additional Resources

JLR has published a variety of documents related to IDS, Connectivity and DVD119/SDD. The table below should be used as a directory of information for retailers when trying to educate technicians about SDD or provide support information to IT staff tasked with resolving IDS connectivity concerns.

Communication Type	Communication Title	Jaguar Publication Number	Land Rover Publication Number
Alert	Availability of IDS Update DVD119v8.03	JA09TE-29 (JBN-Product Support)	SA09TE-29 (InfoTrail)
Alert	DVD 119 Special Loading Instructions	JA09TE-26 (JBN-Product Support)	SA09TE-26 (InfoTrail)
Alert	DVD 119 Installation Issues	JA09TE-27 (JBN-Product Support)	SA09TE-27 (InfoTrail)
Bulletin	SDD Intro / DVD over the web Intro	1-225NAS (JBN-Product Support)	STE09-10 (InfoTrail)
Bulletin	DVD119 Release Note	DVD119-00 (GTR)	DVD119-00 (GTR)
Bulletin	SDD Anti-virus and Firewall requirements	1-235NAS (JBN-Product Support)	STE10-03 (InfoTrail)
Training Materials	Draft- SDD Student Guide	SDD Draft (GTR)	SDD Draft (GTR)
SSM	IDS-SDD Transition Guide	42753 (GTR or EPQR)	42752 (GTR or EPQR)
SSM	Changes to Windows / Internet Explorer by installing DVD119	42766 (GTR or EPQR)	42765 (GTR or EPQR)
SSM	JLR IDS File Import Tool Modified to Send SDD Session Files	42851 (GTR or EPQR)	42850 (GTR or EPQR)
SSM	Welcome to SDD main menu displaying IDS icon	Not Applicable	42913 (GTR or EPQR)
E-learning Course	SDD Web Course	JLR T&D	JLR T&D
Diagnostics > Patch Files	Automated Patch Installation - IDS Connectivity Project (Connectivity set-up and troubleshooting info)	"Connectivity" (GTR)	"Connectivity" (GTR)

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NOTE: Changes from v2.4 to v2.5 issued 6/11/2010 are highlighted in gray

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Please note this document is generally organized by order of most significance, not workflow order when using SDD.

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Appendix A: Advanced diagnosis and repair validation using SDD

Appendix B: Help us help you.....

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1. DTC processing within the SDD environment.

One of the largest differences between SDD and the "Legacy IDS" environment is how DTC's are managed. While both systems are obviously capable of reading, displaying and clearing DTC's, the most significant difference is that SDD requires DTC's information to provide diagnostic recommendations for technicians.

Additionally, the DTC functions to read and display information are spread across different procedures/tabs within the SDD interface. SDD also employs an automated "silent" DTC read at the start of every SDD session for display at a later time when and if the technician launches a "diagnostic" session type.

DTC fundamentals when using SDD		
Function / Concept	When / Where	Intent / Purpose
Automated "silent read" process.	After the vehicle has been identified, and ANY session type is selected, IDS will perform a "global" DTC scan of the vehicle in the background. This is fully completed once the Vehicle Network Display is first displayed during the current session.	Since SDD relies on vehicle information to provide diagnostic recommendations the DTC info must be read and loaded into the current session before any other work is performed. This ensures SDD has a record of the vehicle condition as it arrived for this service visit at the first point it was touched by IDS.
DTC data preservation within the current SDD diagnostic session.	Once the DTC info was read from the vehicle using the "silent read" process, that data is loaded and saved in the current session until all diagnosis is complete and the technician manually triggers one of 2 possible "re-read" functions.	Once the initial data is collected, the technician can execute any number of tasks in any order, and the Symptom Driven Diagnostic guidance will not be corrupted by DTC's induced or deleted while performing other diagnostic procedures.
DTC data preservation via SDD session storage / retrieval	From the "sessions" tab at the upper right portion of the SDD screen, users can easily import / export / load diagnostic sessions. When resuming a previous session, the preserved DTC information is immediately available, based on session status when it was previously interrupted.	Since it is not uncommon for complex vehicle failures to be diagnosed and repaired over several days, especially when replacement parts need to be ordered, SDD extends the DTC data preservation strategy across multiple service sessions.

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DTC processing comparisons		
How Do I...	"Legacy IDS"	New SDD interface.
...perform an initial Global DTC scan?	Leave the "Content Model" set to "Complete Vehicle", then select the "DTC Viewer" tab, and click the "Read DTC" button.	SDD performs a complete global DTC scan in the background when starting a "diagnostic" session. After the vehicle network status is displayed, and the vehicle symptoms are input, the DTC's from that initial global read will be sorted and displayed using the SDD "Event Viewer".
...clear and re-read DTC's to verify repairs?	All the typical DTC read and clear operations are conducted from the "DTC Viewer" Tab.	Since SDD organizes all the diagnostic functions on SDD into a list of "recommendations" based on vehicle symptoms, the clear and re-read DTC functions are listed as one of the options offered on the "Recommendations" tab.
...clear or read DTC's for a specific system / sub-system.	Individual systems can be selected and cleared from within the "DTC Viewer" tab. When codes are re-read, the content model position determines which modules will be included.	Since SDD is capable of sorting a prioritizing tools and information based on vehicle symptoms, it will always analyze the vehicle condition as a whole. It is not possible to clear/read DTC's for a specific system using SDD.
...preserve DTC data.	All DTC info is "volatile" in the "Legacy IDS" environment. Once codes are cleared, there is no mechanism for users to recall info previously read out from the vehicle.	Since DTC info is preserved within SDD sessions, it is possible to export the current diagnostic session immediately after the "silent read" has been completed. If this is done when the vehicle is first touched by IDS during the current service visit, it ensures that the original DTC information related to the customer's complaints will be available for future reference for any reason.
...perform an On Demand Self Test (ODST)	Highlight the desired control module, if an ODST is supported, the ODST button will appear on the right side of the screen. Clicking the ODST button will initiate the test sequence within that control module.	ODST is offered as one of the tools listed in the recommendations tab. Only control modules related to the customer symptoms will have the ODST option displayed.

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While SDD is designed to preserve DTC within the session, there are 2 methods that will release and re-read new DTC info from the vehicle for use during the current diagnostic session.

1. "Data Refresh" icon on the "Network Summary" screen. (see Section 2 for more info)

The intent of this method is to allow the technician to repeat the initial DTC data collection when it becomes necessary to investigate and correct diagnostic communication failures to the vehicle when one or more modules indicates data was not collected on the Network Summary screen.

2. Using a "Re-Read DTC" function listed on the "Recommendations" tab.

This method should only be used to support a repair validation process AFTER ALL DIAGNOSIS AND REPAIRS ARE COMPLETED. (Refer to Appendix A for more info)

IMPORTANT NOTE: LM – Range Rover components on the DS2 BUS.

An emerging issue reported via EPQR is currently under review in the UK. At this time, the known issues are limited to how DTC's are decoded for the Parking Aid Module (Park Distance Control) on 2006 Range Rover vehicles, but it is expected that 2006 > 2009 Range Rovers might be affected. Please read the info below and watch for updates on this concern via an SSM and/or a future release of this transition guide.

Issue: When working with SDD on Range Rovers equipped with "legacy BMW" design Parking Aid Modules, the DTC's status may not be decoded correctly. Active DTC's may be incorrectly classified as "not tested" and will be hidden by default.

Cause: While this issue is currently under review, it is expected that complications with this BMW designed component will require a modification to the DTC processing strategy within SDD.

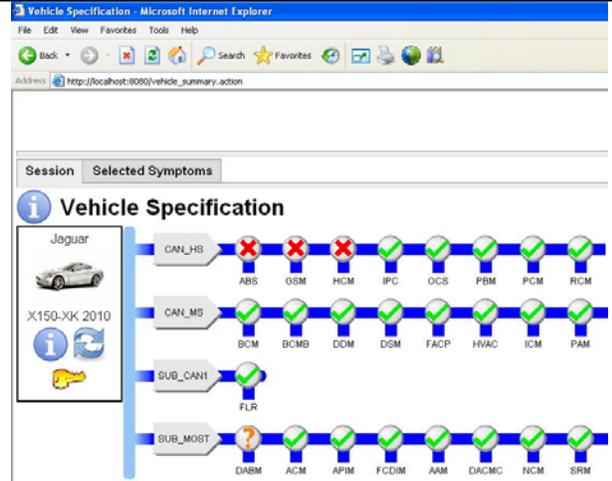
Solution: When the customer's reported symptoms include Parking Aid issues, the "Show Not Tested" option may need to be selected for SDD to display active DTC's stored in the PAM. There are no known issues with how SDD provides recommendations for this system, only how the DTC's are displayed. The required pinpoint tests, documents and other tools should be readily available.

Until the scope of this issue is fully understood, technicians having difficulties diagnosing ANY "legacy BMW" module on the DS2 Bus might want to review the "not tested" category if no active DTC's are listed. If it is believed that this issue is creating diagnostic difficulties for other systems on the DS2 Bus, contact the Land Rover Technical HelpLine for assistance.

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2. Network Summary Screen

SDD users will become very familiar with the screen below as it appears at the start of every new or resumed session. It is referred to as the "Network Summary" since the control module status information is organized based on which network it belongs to.



IMPORTANT: When viewing the "Network Summary" technicians MUST understand that this is NOT a direct evaluation of vehicle network failures, it is only a representation of the communication possible between IDS and the vehicle's control modules during the "silent DTC read" at session start.

For this reason it is important that specific actions are taken by the technician when the Network Summary indicates communications failures before performing diagnostic work using SDD, and specifically before allowing any DTC's to be cleared.

Considerations and "Best Practices" required when negative results are indicated on the Network Summary.

As explained in the previous sections about how SDD performs a "silent DTC read" to load DTC information from the vehicle into the current diagnostic session, it is important that techs understand the potential problems that can be created when IDS fails to capture all the DTC information possible at session start.

In most cases, provided the IDS equipment is in good repair, and the vehicle's diagnostic socket is not compromised, a negative result is seen in the Network Summary, will simply indicate a problem exists within the vehicle network or specific control module.

However, IF the negative results seen in the Network Summary are strictly the result of a problem with the IDS equipment or diagnostic socket, valuable DTC information from those control modules will not be available. This can inhibit SDD from offering or effectively prioritizing recommended tools.

IMPORTANT: If a diagnostic session is started under such conditions, and a successful code clear procedure is performed before all available DTC data was captured from the vehicle, diagnostic data can be deleted with no method to retrieve it. When the customer symptoms are intermittent, and stored DTC info is inadvertently cleared as outlined above, the effectiveness of SDD will be greatly reduced, and FRFT difficult to achieve.

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BEST PRACTICES

When the Network Summary indicates negative results for one or more control modules first perform some basic visual checks of the IDS hardware and vehicle diagnostic socket. It may be effective to cycle the ignition key as well.

Refit the cables then click the "Refresh Data" icon on the Network Summary screen, just below the vehicle image.

If the Network Summary now indicates complete success, it will be "safe" to proceed with whatever diagnostic/service work is required for this session, as the entire vehicle's DTC information will have been collected and saved for use as explained in the previous sections in this document.

If the Network Summary still indicates negative results, consider which modules are being reported as "off line", and compare that to the vehicle behavior. For example, if the ABS module displays a "red X" on the Network Summary, and the ABS module itself is not communicating on the vehicle networks, there should be numerous warning lamps and error messages displayed on the vehicle's instrument panel.

To draw a comparison between the Network Summary in SDD and Legacy IDS behavior, would be as follows.

- The Network Summary is a mostly similar to Global DTC read on Legacy IDS.
- When negative results are seen on the Network Summary, this is similar to seeing an "error" listed next to a control module name in the DTC monitor on Legacy IDS where one would normally see a DTC count displayed.

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3. Advantages of viewing DTC info on a timeline.

NOTE: This feature is currently only supported by Land Rover products, the New XK and XF, and this is determined by the type of diagnostic info generated by the vehicle. Future Jaguar products are expected to follow this strategy, but other existing Jaguar models are not enabled to support this strategy.

While it is possible to manually sort and display DTCs by time or mileage using the "sorted DTC" display on Legacy IDS, this will be the default for SDD, and all DTCs will be associated with mileage based "events" on a timeline displayed when viewing the "related events" or "unrelated events" tab.

While SDD is empowered with the ability to link DTC's to symptoms, it will leave the technician responsible for evaluating the timing of the events relative to the customer's complaint. It will be most effective when service advisors accurately document the customer's story on the repair order, especially in association with warning lamps and electrical failures.

- Check Engine light illuminated **at about 35,000 miles.**
- The audio has been cutting out intermittently **shortly after the 15K service.**

With this detail documented during service write-up, the information on the event timeline can be used to more effectively associate one group of DTC's with a specific customer's complaint. Also since the timeline can be sorted by time as well as distance, the following examples would be equally useful to the technician.

- Check Engine light illuminated **2 weeks ago.**
- The audio has been cutting out intermittently **for about a month now.**

The option to sort DTC's by time provides a significant advantage for technicians when multiple DTC's have been stored at the same mileage. Since the time sorting is possible down to the 10th of a second, it is most effective for identifying the root cause of multiple failures. This becomes most significant when it involves network failures within the vehicle where a few "hard faults" cascade out to multiple modules as network info U04xx DTC's.

Sort the DTC's by time, and look at the first 3 -5 DTC's in the list for that event as the most significant issues and likely root cause.

IMPORTANT: (RE: Issue reported about "missing" DTC's when using SDD)

By default SDD ONLY displays DTC's within the most recent events in the timeline as indicated by the red colored blocks. Each vertical black line displayed in the timeline indicates a specific "event" that will contain one or more DTC's that occurred at that distance/time.

Users are expected to select and deselect portions of the timeline to view each event individually or in small groups when clustered within a single "block" of distance or time. This allows technicians to quickly determine which DTC's are linked to a common point in the vehicle's history. For example when a cluster of DTCs are set due to low voltage condition or when a single failure cascades out to many modules, these all usually occur within a very short time.

When using IDS, it would take several steps and advanced training to sort and organize DTC's in this manner. While SDD simplifies the sorting of DTC's techs must review all events in both the related and unrelated the timelines to learn about all DTC's in the vehicle's history. **IMPORTANT NOTE: Only two blocks of information can be viewed on the timeline at once.** If two blocks are currently highlighted in red, one of those blocks would have to be "deselected" before another block can be highlighted for viewing.

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Special Considerations When Reviewing The SDD Timelines:

When reviewing the vehicle's timeline of events, it is important to understand where SDD is obtaining the mileage/time information used to organize DTC's on the timeline.

When a DTC is set in a vehicle system that supports the ISO14229 diagnostic standard, information about time/mileage is processed from CAN data and recorded with the "global snapshot" record for that DTC. When SDD processes DTC's from the vehicle, the information in the global snapshot associated with each DTC, is read and used to plot each DTC onto a timeline. Since this is now a primary diagnostic aid, technicians need to be aware of the following key details, and rules regarding this global snapshot data for mileage/time.

1. Since the global snapshot data is only recorded when the DTC was FIRST SET, any single DTC can only be listed once on the timeline regardless of how many times the DTC has occurred.
2. Since the global snapshot data is derived from information broadcast on the CAN bus, there will be times where current operating conditions prevent the recording of mileage/time when a DTC is set. If a DTC is being recorded when the vehicle CAN bus is being initialized, or is suffering from a substantial communications failure, its global snapshot record may not contain valid data to allow SDD to project it on a timeline. Such DTC's will be listed as an "Unknown Event".
3. When investigating customer concerns about "Check Engine" warning lamps, technicians must consider the implications of PCM/OBDII "Two Trip" DTC's such as those for Evaporative Emissions Leaks.
 - Since each DTC will only record global snapshot data from the *first time* it was detected, "Two Trip" DTC's that do not trigger a "Check Engine" light on the first occurrence may not appear on the timeline where the customer has reported the "Check Engine" light first illuminated.
 - For example, if the PCM first detects a P0456 @ 5500 miles, this code will be set with 5500 miles as the global snapshot data. If the problem is intermittent and/or the diagnostic monitoring conditions prevents this code from being detected or set a second time in close proximity to the original failure @ 5500, the "Check Engine" light may not be illuminated for several hundred or even thousands of miles depending on the customer's driving habits etc.
 - When the vehicle condition finally degrades to the point where the "Two Trip" requirements are fulfilled to trigger the "Check Engine" light, the customer may be reporting the failure occurred @ 7500 miles, but the strategy in the vehicle to record the global snapshot record at the time of the first occurrence will place this DTC further back in the timeline at the 5500 mile mark.
 - For a reference of which PCM DTC's are regarded as "two trip" failures to trigger a MIL, consult the OBDII systems documentation on GTR..
4. Since most other systems and DTC's will trigger an "instant" MIL or informational message in the instrument cluster, it is fundamentally reliable to directly associate the customer's story with the events in the timeline for all other areas of vehicle operation except the "two trip" DTC's in the PCM.

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4. DTC Pinpoint Tests

While SDD uses similar pinpoint tests technicians are familiar with from using Legacy IDS, the SDD interface has been re-organized and accessing the pinpoint tests are different in a few ways.

1. Pinpoint tests are NOT launched from the DTC displays; they are listed as tools on the recommendations tab.
2. When viewing the list of pinpoint tests on the recommendations tab, there are no references to a specific DTC, this is simply because one pinpoint test might apply to several DTC's.

When viewing the DTC listings on the event viewer screens, there are several icons that appear to the right of the DTC description. In addition to the icons for DTC Status, Description, and Snapshot info, DTC's that have a corresponding pinpoint test available will also display a "Guided Diagnosis" icon.

Distance	Description	Status	Options	Relevance
15 km	ABS pump motor control			100%
15 km	Invalid data received from ABS control module			0%

DTC Status
DTC Info (click to display description/possible causes)
DTC Snapshot (click to display)
Guided Diagnosis (click to "filter" recommendations)

When the "Guided Diagnosis" icon is clicked, SDD will switch over to the "recommendations" tab, showing a "filtered" list of tools only related to this DTC.

When a "Guided Diagnostic" filter is applied.....

SDD automatically jumps to the recommendations tab.

Vehicle Settings Sessions

Session Selected Symptoms Related Events Unrelated Events Recommendations

Recommendations (Ordered by priority)

Filtered by DTC C0020-1C

The DTC filter selected will appear here. After your testing is completed, click the "filter" icon on this screen to restore the complete list of recommended tools.

Type	Description	Status	Options
	ABS PUMP MOTOR POWERFEED TEST	Not run	Run

Highly Recommended

Recommended

None

General Diagnostics and Tools

None

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5. Repair Validation

Since it is clear that SDD is designed to retain DTC info first read from the vehicle during the current session, some specific actions must be taken to ensure technicians are correctly interpreting the DTC's displayed when performing a repair validation process.

After ALL diagnostic procedures have been run, ALL repairs have been performed, and the technician is confident the vehicle is ready for return to the customer, the technician should take the following steps to execute a "basic" repair validation before executing a road test (when required).

1. From the recommendations list, locate and run the "Re-Read DTC's" function.
2. Return to the "Symptom Selection Screen" and ensure all of the applicable symptoms are currently selected.
3. Select "Continue" and allow SDD to process the current vehicle info.
4. Review the "Related Events" for any remaining DTC's.
5. Additional DTC info can be seen if the "show" option is selected to display "Not Tested" DTC's to confirm that the vehicle has met the requirements to self-diagnose a specific DTC.

Note: Refer to current JLRNA Warranty Policy and Procedures Manual for diagnostic related labor claim information.

Additional considerations.

For advanced information and advice regarding DTC's and diagnosis / repair validation using SDD, refer to Appendix A at the end of this document.

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6. Datalogger functionality using SDD

Since the SDD user interface has new features and behavior compared to Legacy IDS, the unique Datalogger tab is not provided. When using SDD, Datalogger appears as one of the tools available on the recommendations tab for 2 session types.

- Measurement Applications
- Diagnosis

To launch Datalogger simply locate it on the list of recommendations, and click "run". The typical Legacy IDS Datalogger will be loaded into the recommendations tab, with its full compliment of tabs and buttons in a layout identical to how it appears in Legacy IDS.

However, there are some minor changes that need to be understood when using Datalogger within SDD.

- Since SDD does not implement a "Content Model", Datalogger will default to the "100-00 Complete Vehicle" signal listings.
- Since Datalogger does not appear in its own tab, when finished, one must "exit" Datalogger by selecting that option using the "Menu" button at upper right, where the existing "Print" function is located.

NOTE: There is one significant difference regarding how Datalogger behaves in the SDD environment. Since Datalogger defaults to the "Complete Vehicle" when running within SDD, Output State Controls are currently enabled for all vehicle systems at all times once "Enable Output State Controls" is selected.

Datalogger behavior is subject to change on a future DVD as SDD is developed further potentially to include filtering and linking of datalogger signals to specific symptoms or DTC's.

7. Control module programming / replacement using SDD

This is another area where SDD has some significant changes over Legacy IDS. The changes however are limited to when and where control module programming can be accessed by the technicians, not how SDD actually programs control modules.

The Basics:

Over the years, JLR has determined that unnecessary control module programming has lead to lost time, inaccurate diagnosis/repairs and potentially worse negative results. For this reason SDD strives to curb this behavior before technicians consider more traditional actions for diagnosis and repairs.

The important thing to understand is that SDD does not explicitly "restrict" access to module programming / replacement; it simply masks access to these functions at the onset of a diagnostic session until a basic level of diagnosis is attempted.

For example when there is no communication possible with a specific control module, SDD will offer a pinpoint test to assist technicians with checking power and ground circuits, etc.. After the pinpoint test is utilized to test the vehicle wiring, control module programming will be unmasked for that module.

While working in a "diagnosis" session type, control module programming options that are "unmasked" will appear on the "Extras" tab after performing recommended diagnostics.

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Performing vehicle software updates:

Another common scenario related to module programming would be when a vehicle is subject of a service action or recall. In most cases there will be no diagnosis required before techs are expected to reprogram a specific module. To support such work using SDD, technicians should select the "Campaign" session type.

The Campaign session type does not require any symptom selection, and SDD will directly display a list of control modules for programming on the recommendations tab. Using the published instructions for the service campaign required to be conducted, technicians must then re-program **only the specific modules targeted by that campaign.**

IMPORTANT: When working within a Campaign session type, the recommendations tab will include a FULL list of modules that are related to one or more service campaigns for that model range. This is a GENERIC LIST of modules and does not imply or mandate that every module on that list requires an update. *Instructions provided in campaign specific documentation MUST be followed as written and only applied to vehicles that are still eligible for that specific campaign as per JLRNA Warranty Policy and Procedures Manual.*

Control Module Replacement:

Control Module replacement will not require additional considerations unless the required parts are not available at the time the initial diagnosis using SDD was conducted.

Working within the initial diagnostic session, the "Configure New Module" option will be offered on the "Extras" tab after diagnosis has been performed. Once it has been determined a module requires replacement, it can be installed and programmed using the tools provided in the current session.

IF for ANY reason the current diagnostic session must be interrupted before a replacement module can be sourced and installed the following actions are recommended once access to control module programming has been "unmasked" on the extras tab.

- Export the current session to a USB memory stick, and store safely.
- If desired, continue with any other diagnosis and repairs as required.

Once the replacement control module has been obtained, resume the original diagnostic session.

- Obtain the saved session file for this VIN where access to the "Extras" tab was enabled.
- Start a new diagnostic session for this VIN, and after the vehicle has been identified, immediately import and load the saved session.
- Access to the "Extras" tab should be available immediately, commence programming as new for the replacement control module.
- Complete typical repair validation checks as required.

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8. Advanced Benefits of SDD Session Portability

As explained in the DTC sections of this document, SDD is designed to preserve DTC data within the current diagnostic session. This data preservation strategy is also applied to the symptom selection process and the tracking of tools accessed from the recommendations tab.

Ultimately sessions can be placed "on hold" and resumed at a later time with all session related data restored without having to re-read the information from the vehicle, or collect symptom inputs from the technician. Additionally, the features provided to export / import sessions via a USB flash drive expands this functionality to allow work to begin on one IDS system and then completed days later on a completely different IDS system if required.

The portability of this session data provides greater flexibility and eliminates reduces time required to resume sessions etc. Some examples include;

- Initial diagnosis indicates that control module "x" needs to be replaced, and the part is not in stock. A session saved can be resumed exactly where left off days later on any IDS unit in the shop. Programming of control module "x" can then be completed quickly without having to start a new session from scratch.
- A technician begins working on a vehicle late on a Friday afternoon, at quitting time; he is still working with SDD to diagnose the vehicle. While it is possible that the tool can be left untouched over the weekend, this is often not the case. Upon return to the shop on the following Monday, the IDS unit has been rebooted, or taken for work on another vehicle. If the session was exported to a flash drive, any IDS in the shop can be used to pick-up almost exactly where the diagnosis left off on the previous Friday.
- While working with SDD, the IDS system develops a physical problem with the screen, keyboard or mouse, making it very difficult to proceed with repairs. Exporting the current session to the flash drive will allow the technician to complete the work on this vehicle using another IDS system with minimal lost time.

While it may not be practical for every technician to own his own IDS diagnostic system, if every tech at least owns a USB flash drive with at least 512mb of space for storing sessions they can store / resume work for any vehicle on any IDS system as if it were their own personal kit. Think of it like using a locker at the gym, you don't own the gym or the locker, just the clothes you store in it. When you come back 2 days later, you'll probably use a different locker, it's not important.

9. General application notes and reference

SDD Start-up/Shut-down.

SDD represents a new generation of diagnostic software that has been designed to support future JLR technologies over the coming years. In its current form, the SDD application runs as a background function with a user interface displayed in an Internet Explorer Web Browser. While this is of no interest to technicians while using SDD to diagnose vehicles, the start-up and shut-down process is significantly different from Legacy IDS.

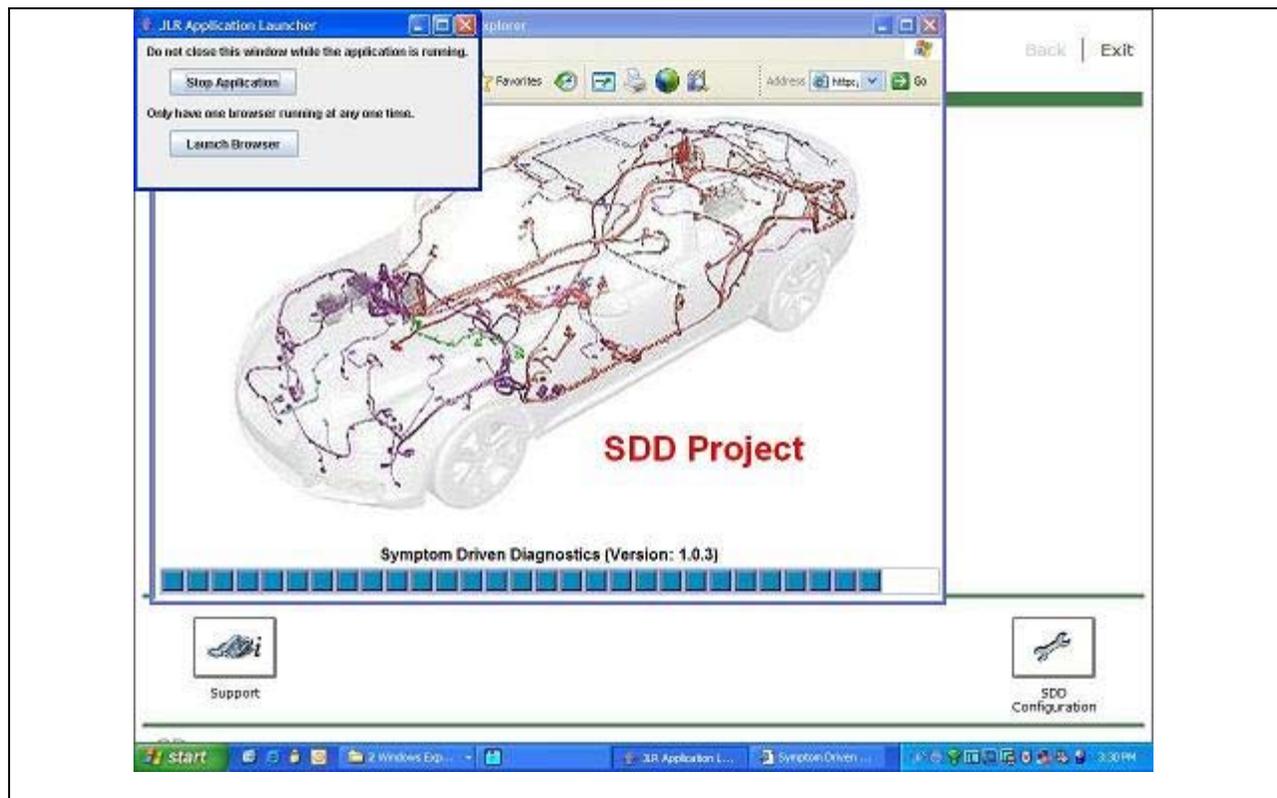
SDD Start-Up:

After DVD119 has been installed, the IDS icon on the IDS Main Menu will be replaced with an SDD icon. When the SDD icon is clicked to launch the SDD application, the two parts of the SDD application will be launched.

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A small "JLR Application Launcher" window will appear, with two buttons. This is connected to the SDD "background" process, and represents the functional application behind the SDD user interface that appears in the web browser.

At the same time the JLR Application Launcher is started, an SDD start-up "splash screen" will appear briefly, and the Internet Explorer window containing the SDD user interface will appear.



There is nothing special that needs to be done during SDD start-up. When the SDD interface is loaded into the Internet Explorer window, the application is ready to go.

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SDD Shut-Down:

As explained above the SDD interface displayed in the internet explorer window is independent from the main application running in the background. If only the internet explorer window is closed, this will not shut-down the SDD application.

The JLR Application Launcher window includes 2 buttons, one to shut-down the SDD application, another to launch the web browser and SDD interface.

	<p>The "Stop Application" button should only be used when you are ready to exit SDD completely. If instructed to "shut-down" SDD for required maintenance or troubleshooting, this button must be used; simply closing the web browser does not shut-down the SDD application.</p> <p>If at any time the web browser hosting SDD is accidentally closed, a new one can be reopened for SDD by clicking "Launch Browser" in the JLR Application Launcher.</p>
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If you are unsure about the current status of the SDD interface or you are having problems with the SDD application, the best practice would be to reboot the laptop to reset the entire system and launch SDD from scratch.

One Size Fits All

While it is true that the SDD technology is only offered on some models currently, all diagnostic work using IDS begins in the SDD environment. Regardless of which vehicle you are working on using IDS, select the SDD icon on the Main Menu. After the SDD interface loads completely, a VIN entry screen will appear.

- Connect the Midtronics PSC550 to the vehicle.
- Connect the diagnostic cable from the VCM to the vehicle's DLC connector.
- Wait for the VCM icon on the SDD screen to indicate the VCM is ready.
- Switch the ignition on
- Ensure the vehicle battery voltage indicator is not displaying "low voltage" (red battery icon)
- Click "READ" to display the vehicle VIN, then click "Identify Vehicle"

Vehicles supported with SDD technology will proceed directly through the SDD diagnostic process, vehicles not supported by SDD will have a suitable message displayed. A link will be provided on this screen to launch "Legacy IDS" for vehicles not supported by SDD.

NOTE: While the SDD VIN entry screen is generic and it is NOT required to manually select the Jaguar or Land Rover brand to start a diagnostic session, Land Rover vehicles not previously supported on IDS, WILL NOT be supported by SDD. Diagnosis of "legacy" Land Rover vehicles will continue to require Land Rover T4 hardware and software.

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Watch the Hard Drive Activity Indicator before "clicking" a second time!

SDD screen behavior and reaction to user inputs is often delayed. This is one of the primary reasons that users report SDD is slow or unresponsive. Also, when users are repeating the input a second or third time etc, by clicking the icon or link, these can create further delays by generating multiple requests and in some cases can induce errors and lock up.

As explained earlier in this chapter, the SDD application itself is running in the background and the internet explorer window is just the user interface. When a tab, button, hyperlink or other control is clicked in the internet explorer window, a command is passed from the user interface to the SDD application running in the background. Often the screen display remains unchanged while SDD is processing that command.

By observing the LED for Hard Drive activity, it will become more apparent when SDD is actually processing data in the background. If after clicking a tab, button, hyperlink or other control the screen display does not change immediately or otherwise indicate activity, see if the hard drive indicator is flashing.

When the hard drive indicator is blinking rapidly, your request is being processed in the background. DO NOT repeatedly click controls within SDD without reviewing the hard drive indicator as suggested.

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SDD Software Updates

(Clarification to Admin Bulletin [SDD Intro / DVD over the web Intro](#) 1-225NAS and STE09-10)

- 1) The documentation only discusses the DVD version as it will be displayed within SDD or referenced in other publications. (NOTE: THIS ISSUE HAS BEEN CORRECTED. WITH THE INTRODUCTION OF DVD120 THE ADDITIONAL "BUILD VERSION" HAS BEEN REMOVED FROM SOFTWARE UPDATE FILE NAMES)

The software update version is explained as .01, .02, .03 etc, and for example will be displayed within SDD as DVD119_V8.05. This is correct, however the actual file names used to deliver these updates will include additional "build version" levels at the end of the file name.

When viewing software updates using the software update manager or when manually collecting files from the <http://diagnosticdelivery.com/IDSCentral> website, an additional underscore and numeral will appear in the file name.

IDS_DVD119_V8.01_5.exe

In this example, this is "build #5" of "software update #01". This "build version" info is to be ignored. The update number indicated by the ".01" is what identifies the file and its correct place in the installation sequence.

- 2) The DVD119 intro documentation discusses how updates for DVD119 onwards are "cumulative" and the most recent update will include the content of all previous updates. DVD119 actually has an exception to this new rule. (NOTE: THIS ISSUE HAS BEEN ADDRESSED WITH THE INCLUSION OF SPECIFIC GUIDELINES ADDED TO EACH SOFTWARE UPDATE RELEASE NOTE BEGINNING WITH DVD120)

Since DVD119 was still delivered as a physical DVD in the mail, updates #01 & #02 are "standalone" updates that do not follow this rule, and must be installed "sequentially" as done previously with traditional patches for older DVD's

DVD119 update #03 is the first "cumulative" update, and DOES NOT INCLUDE the content of updates #01 or #02.

Updates #04 and #05 are proper "cumulative" updates that follow the new rules explained in the "DVD over the web" intro bulletin. Update #04 includes the content of update #03, and update #05 includes the content of #03 & #04.

To better illustrate this situation, let's assume an IDS system needs to be restored using the tools provided with the phoenix recovery console. After the "static restore point" has been loaded, DVD119 and its updates will need to be installed. At the time of this writing, the completed installation should include DVD119_V8.05, and the following installation process applies.

- Install DVD119_V8
- Install DVD119_V8.01
- Install DVD119_V8.02

Since updates 3 through 5 are "cumulative" only the last update needs to be installed.

- Install DVD119_V8.05

After the main application is installed to the latest level, don't forget to install the SPA Pinpoint tests also!

IMPORTANT NOTE: *The DVD over the web Software Update Manager will automatically select the correct installation sequence.* Users only need to be aware it is expected that subordinate cumulative patches will be skipped over.

Also this info is important to save time and eliminate redundant work if it becomes necessary to manually update IDS equipment using the files offered on the <http://diagnosticdelivery.com/IDSCentral> website.

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"Sorry, document not available" (from the "DVD119 issues list")

Since a direct link between GTR and SDD currently does not exist, technical publications like bulletins and SSM's need to be manually added to SDD via a DVD or software update release. In some cases, this process can be complicated when a publication on GTR is comprised of several sections or contains an attachment. For this and other reasons, it may only possible to include a document title as a "placeholder" reference on the recommendations tab on SDD.

While the JLR diagnostic team strives to avoid this situation, SDD users will at least gain awareness that a specific publication exists on GTR.

When SDD displays the "Sorry, document not available" message, after clicking the "READ" link on the recommendations tab, the following instructions can help expedite the process of retrieving that document from GTR.

- Return to the SDD recommendations tab.
- "Hover" the mouse cursor over the "READ" link for the missing document without clicking the link.
- With the cursor correctly positioned, look to the lower portion of the Internet Explorer window to observe the information displayed in the "status bar". A long string of text should appear in the status bar while this is being done.
- At the end of that text string will be a reference to a bulletin or SSM number. Take note of this information to conduct a "quick search" on GTR.
- Log into GTR.
- Once at the GTR home page, enter the document number noted from SDD into the "quick search" box at the top right corner of the SDD home page and execute the search.
- GTR should quickly locate the document by ID entered into the quick search

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- If the item is not found, try entering less info and repeating the search. It may help to just enter the numbers without the other text like LTB, JTB, or SSM etc.

10. Improving SDD effectiveness and best practices for selecting vehicle symptoms. (RE: Issue reported where SDD does not correctly link symptoms to DTC's or recommendations)

In order for technicians to be successful using SDD, they must understand how SDD is designed to assist them.

The single most important thing to remember about selecting symptoms when working within a diagnosis session type is that SDD is engineered to link DTC's and provide recommendations based on "Customer Facing" and/or the "most significant" symptoms.

- Techs should never try to "short cut" or "refine" the customer's reported symptoms based on expected failures or previous experience. If the "primary" or "most obvious" *Customer Facing* symptom would be a MIL or message center warning, those symptoms MUST be included in your symptom selection inputs using SDD.
- While it might be tempting or seemingly logical to tell SDD that the "air suspension is inoperative" without bothering with the symptom for the "message center warning", SDD may actually try to EXCLUDE DTC's or diagnostic recommendations that relate to failures known to trigger a warning message or MIL if that symptom was not selected!
- It is perfectly acceptable to add additional symptoms or observations noted during a road test provided the most obvious symptoms and customer reported info is included in the symptoms selected using SDD.

The second most important thing to remember about SDD is that you may want to adjust what level of detail is selected within the system selection trees to help improve results displayed on the related timeline and recommendations list.

- When very few or no events/DTC's and recommendations are listed, try restricting your symptom inputs to the minimum required "3rd level" in the symptom tree.
- When too many events/DTC's or recommendations are listed, try drilling down into the 4th or 5th levels taking care not to select an "inaccurate" item for the customer's complaint JUST to make a selection at that level.

IMPORTANT CAREPOINTS:

- If there is no better description in the list at levels 4 & 5 then you MUST work with the more generic symptom selected at the higher level.
- Always try to input the most accurate symptoms and take care not to select any random symptoms with an unexpected mouse click or contact with the touchscreen.
- To be sure you are only working with your intended and accurate symptom list; open the "Selected Symptoms" drop down box at the upper right portion of the Symptom Selection tab to review all currently selected symptoms.

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Additional symptom selection info for "Smart Key" equipped vehicles.

(RE: Difficulty selecting symptoms to effectively diagnose keyless vehicle / smart key issues on DVD119 issues list)

When there are "no-start" symptoms reported for vehicles that are equipped with a "Smart Key" and "Start / Stop" push button to control the vehicle ignition, there are two areas of the SDD "symptom map" that could be associated with symptoms of this genre.

While it may be obvious to select the "Powertrain > Engine system > Starting system > Will not start > Will not crank" to describe the "no crank" symptom, which is common to both smart key and conventional ignition systems, the smart key system would need additional symptoms selected to indicate when the smart key system is completely unable to activate the ignition and power up the instrument pack and other on-board systems.

These additional symptoms are mapped to "Electrical > Battery > Power distribution > Ignition supplies". This map location includes 2 options for "No ignition" and "No ignition with key docked" so be sure to select one or both as required.

Summary:

When working on a "no start" complaint and inputting symptoms into SDD; It is important to distinguish between a situation where ignition control IS possible, and ONLY a starting problem exists, compared to when the ignition control and start button are NOT correctly actuating the "ignition on" status at all.

- When ignition control IS possible, but the engine simply will not crank /start; Limit your symptom selections to the "Powertrain" sections.
- When ignition control IS NOT possible, be sure to input both the "Electrical > Battery > Power distribution > Ignition supplies" symptom, AND the "Powertrain > Engine system > Starting system > Will not start > Will not crank" symptom.
- If unsure because the symptoms are intermittent and the customer verbatim is not recorded on the repair order with sufficient details, it is suggested to assume that ignition control is failing and to include both the Powertrain and Electrical related symptoms.

Note: The symptom map location "Powertrain > Engine system > Starting system > Start-stop system" is aligned with symptoms for the ROW Diesel engines that utilize an eco-friendly "Start-Stop" system to reduce fuel consumption and carbon output. This is not applicable to petrol engines or the smart key start button operation.

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Selecting MIL and Driver Warning Message related symptoms.

When the vehicle symptoms are related to MIL and/or driver information warning messages in the instrument cluster, it is important that these symptoms are included as inputs when selecting symptoms for a diagnostic session using SDD.

Users have reported difficulty working with SDD to resolve MIL complaints, and it has been learned that this is usually because the correct symptoms have not been selected.

Regardless of which systems are triggering a MIL or driver information warning, these symptoms can be found in the symptom map under "Electrical > Instruments > Warning Lamps" (for MIL symptoms) and "Electrical > Instruments > Information and message center" (for message related symptoms)

Selecting additional MIL / Message symptom details at levels 4 & 5 in the symptom map can assist with narrowing down problems when too many candidates are listed on the recommendations tab. (see page 25 for more info)

CLARIFICATION OF TERMS:

When viewing the symptom categories within the Electrical > Instrument Cluster section, there are 3 classes of "driver information" symptoms.

- WARNING LAMPS
- WARNING MESSAGES
- STATUS LAMPS

When matching customer symptoms to symptoms in these 3 categories, technicians must be aware of the subtle but significant differences represented here, since an incorrect choice may cause SDD to provide no guidance, or incorrect guidance on the "related events" and "recommendations tabs".

While it may be obvious to distinguish the difference between a Warning Message and Warning Lamp, that is currently active, if the problem was intermittent, the service writer must ensure they accurately determine if a warning lamp, warning message, or both were displayed.

Also, not every "MIL" lamp would be considered a "WARNING LAMP" since some indicators on the dash are used to indicate the "STATUS" of a system. Obvious examples of "STATUS LAMPS" include the "Passenger Seat Occupancy Status Lamp", and the "TPMS Status Lamp". These indicators are used to inform the driver about the status of that component or system, and would not be a considered a "WARNING LAMP" like a "Check Engine" light.

Using the "Passenger Seat Occupancy Status Lamp" example, this light is only used to indicate the status of the passenger seat. When it's lit, it simply indicates that the SRS system has determined that based on the current inputs, the passenger restraints will not be deployed. *It does not mean the system has detected a failure that requires a driver warning.* For this reason, this lamp would be classified as a Status Lamp.

Similarly, the amber TPMS indicator is simply used to inform the driver that the status of the tires require his/her attention. While this light may remain lit when a system malfunction exists, since its primary function is to inform the driver of the tire pressure status, it too would be considered a status lamp.

Recommendation: While selecting SDD symptoms for lamps that are primarily considered a status lamp, but are also known to have a secondary function as a warning lamp, then search for and select the symptoms under both categories in the symptom selection map.

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Appendix A:

Advanced diagnosis and repair validation using SDD

Maximizing technicians' effectiveness using SDD will depend on how well they understand SDD's principles of operation and willingness to learn new processes and concepts.

While enabling SDD with the ability to easily store and recall DTC info from saved sessions is a great advantage, not understanding how to implement these features correctly can reduce the effectiveness of SDD.

All techs should learn how to use a USB flash drive to import, export, and load existing sessions. This process is fundamental to many of the advantages SDD offers. (Please refer to the user training information previously released to GTR under "Service Information > Training > Symptom Driven Diagnostics (SDD) Student Guide Draft". For details on how this is done.)

The most important reason to master this session management process is to allow technicians to preserve the original DTC information within the vehicle as it first arrived at the retailer during this current service visit. Since these DTC's will have the most direct connection to the customer complaints /vehicle symptoms when the vehicle arrived, preserving this data immediately at the first point of contact at the retailer is critical.

While under normal circumstances nothing unusual would occur during the current diagnostic session, if there are any unusual circumstances that would cause DTC;s to be erased or added to the current diagnostic session the accuracy of SDD guidance will be reduced.

Having the option to reload the original data from first point of contact at the retailer for this service visit will allow a technician or shop foreman start the diagnostic process over again using only the DTCs that were generated while the vehicle was in control of the owner.

In other cases if SDD was not used to collect data at the first point of contact, and intermittent codes were cleared diagnosis with SDD would have to be handled differently.

- Continue vehicle testing until the symptom returns during the current visit.
- Once the original symptoms return, re-read DTC info from the vehicle using SDD and save that session as if it was taken at the original point of contact.
- Use SDD to input symptoms and diagnose the vehicle based on the new data captured after the symptoms returned.

While this is not a favorable process, it would be considered a best practice if intermittent DTC's have been cleared before capturing the original DTC data using SDD for the first point of contact.

Finally the flowchart that appears at the end of this document is a recommended diagnostic strategy / process for maximizing technician effectiveness using SDD.

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Appendix B:

Help us help you.....

Jaguar- Land Rover North America Service Diagnostics has received a number of EPQR reports for DVD119, and appreciates the constructive feedback and information provided.

There is however a few details that we ask technicians to provide that are required to expedite our investigations and ultimately allow JLR diagnostics in the UK to deliver fixes in the shortest time possible.

For ALL issues reported:

Please indicate all installed software versions from the SDD environment as displayed on the "System Information" tab.

- PC MAC Address
- IDS Version
- SDD Version
- SPA Version
- AS-BUILT File Version
- Calibration File Version

When the issue involves a DVD or update installation problem/error:

- Using the JLRNA File Import Tool v5.1, export the "IDS Log Files" and forward them to Jaguar-Land Rover North America.

When the issue involves a DTC display issue or question related to SDD recommendations and general behavior:

- Using the JLRNA File Import Tool v5.1, export the "Specific IDS Sessions" for the affected vehicle and forward them to Jaguar- Land Rover North America

NOTE: The JLRNA File Import Tool v5.1 has been specifically updated to support the submission of SDD related concerns via EPQR. Refer to the following SSM's on the EPQR website for more info.

- Land Rover SSM 42850 - IDS File Import Tool v5.1
- Jaguar SSM 42851 - JLR IDS File Import Tool v5.1

SDD Vehicle Diagnostic Strategy (per service visit)

